CONTRACTOR QUALITY CONTROL PLAN

APPENDIX C
of the
REMEDIAL ACTION MANAGEMENT PLAN

LANDFILL REMOVAL
FORMER NPD LABORATORY
TROUTDALE, OREGON

Prepared for:

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TABLE OF CONTENTS

1.0 DESCRIPTION OF PROJECT

Cherokee General Corporation (Cherokee), under contract to the U.S. Army Corps of Engineers (USACE) (Contract Number DACA67-00-D-1009, Delivery Order 0014), will perform the removal and disposal of the landfill materials at the former North Pacific Division (NPD) laboratory (the Site) in Troutdale, Oregon. A total of approximately 12,000 tons of landfill contents will be removed from the Site and transported to a permitted landfill for disposal.

The NPD laboratory operated at 1491 Graham Road from 1949 until the spring of 1997. The laboratory was used as a materials testing facility for the entire duration of operations. In 1979, the NPD property was divided by an easement for the extension of NW Graham Road. In 1986, the laboratory expanded operations within the warehouse facility, and began analyzing samples from hazardous and toxic waste sites. Hazardous and toxic samples were analyzed until the cessation of operations in 1997. In addition to the permanent buildings on the property, mobile trailers have been located at the Site. The trailers once housed the USACE Portland District Resident Office, and now house Mt. Hood Community College.

The northern portion of the Site was historically used as a landfill for disposal of residual bulk materials that had been tested, such as gravel aggregate and concrete. The landfill also was used to dispose of solid waste material such as steel drums of hardened concrete, asphaltic paper, and fiberglass insulation. The landfill was unlined, and all material deposited at the Site was placed directly over native soil. Structural concrete test pours were conducted southeast of the landfill in 1952, and southwest of the landfill in the early 1980s. Landfill activities at the Site ceased in 1994.

Field activities will be conducted to characterize the contents of the landfill at the Site, excavate and remove the landfill contents, and confirm that the removal was successfully performed. As part of the field operations, the following definable features of work will take place:

- **WASTE CHARACTERIZATION:**
  - Site Survey and Grid Staking; and
  - In-Situ Waste Characterization.

- **SITE PREPARATION**:
  - Equipment and Facilities Mobilization;
  - Clearing and Grubbing;
  - Erosion Control and Security Fencing;
  - Site Access Road Construction;
  - Truck Decontamination Pad Construction; and
  - Roll-off Staging Area Construction.

- **WASTE EXCAVATION**:
  - Dust Control;
  - Waste Excavation and Loading;
  - Segregation of Waste Inconsistent with Profile;
  - Characterization of Waste Inconsistent with Profile;
  - Roll-off Pickup and Stockpile Removal;
  - Sub-grade Excavation, Stockpiling, and Characterization; and
  - Additional Incidental Excavation and Material Removal

- **CONFIRMATION SAMPLING AND SITE CLEANUP**:
  - Confirmation Sampling;
  - Backfill Sampling;
  - Backfill, Grading, and Compaction;
  - Site Cleanup; and
  - Hydroseeding.

Each of these definable features of work is discussed in detail in the Remedial Action Management Plan (RAMP) prepared for this effort and provided under separate cover.

2.0 DESCRIPTION OF PRODUCTS

The landfill removal action will result in the excavation and disposal of approximately 12,000 tons of soil and waste from the former NPD laboratory landfill area. Following excavation, the Site will be sampled to confirm that landfill materials have been removed, and that no contaminants remain at concentrations exceeding risk-based screening levels. The Site will be backfilled and graded to lines and grades approximating the original Site conditions, and disturbed areas will be hydroseeded.

Documentation of this work will be presented in the Site Closure Report, which will be prepared to document the removal of the landfill contents. The report will contain the following sections:

- Site Background;
- Description of Activities:
  - Mobilization and Site Setup;
  - Waste Characterization;
  - Removal Activities, Procedures, Methods, Duration, and Quantities; and
  - Site Restoration;
- Analytical Data Discussion;
- Disposition of Materials Removed; and
- Conclusions and Recommendations.

3.0 QUALITY CONTROL OBJECTIVES

The project's quality control objectives are to:

- Characterize the contents of the landfill in sufficient detail to profile the waste for disposal in a permitted landfill facility;
- Excavate and remove the contents of the landfill from the Site to a permitted landfill for disposal;
- Segregate any materials identified during excavation that are not consistent with the waste profile;
- Characterize segregated materials in sufficient detail to profile them for disposal in a permitted facility;
- Remove segregated materials for disposal to a permitted facility;
- Collect confirmation samples to confirm that the contents of the landfill have been removed to a sufficient depth; and
- Backfill the Site to lines and grades consistent with original Site conditions, and hydroseed.

4.0 MANAGEMENT

4.1 MANAGEMENT PHILOSOPHY

A primary objective and commitment of Cherokee is to produce high quality products that are responsive to the USACE's needs. To ensure the high quality of products delivered under the above-referenced contract, Cherokee will employ the three-phase quality control process that satisfies the requirements and procedures established by the USACE. This section describes Cherokee's management approach and structure to providing quality products to the client on schedule and within budget.

4.2 MANAGEMENT STRUCTURE

The project management structure is composed of three key positions: Contract Manager, Project Manager, and Field Superintendent/Contractor Quality Control System Manager.

Contract Manager - The Contract Manager oversees the project from a corporate level, ensuring that resources are allocated to meet the needs of the project, and that project quality meets company standards and client expectations. For this project, Ms. Rhonda Herschell will serve as Contract Manager. Contact information for Ms. Herschell is provided in the RAMP. Ms. Herschell will be available to address any USACE concerns that may arise.

Project Manager - The Project Manager serves to direct the day-to-day execution of the contract, pursuing completion of the work in compliance with specifications and USACE expectations, and schedule and budget constraints. Mr. Cliff Brown is the designated Project Manager for this project. Mr. Brown will be the primary contact with the USACE for day-to-day contract issues.

Field Superintendent/Contractor Quality Control (CQC) System Manager - Directing the work performed by Cherokee and Cherokee's subcontractors will be the Field Superintendent, Mr. Rob Copher. Mr. Copher will be responsible for directing field operations, site safety, field documentation and quality control plan implementation. The CQC System Manager may delegate such duties to other personnel who may be assigned to the project.

4.3 MANAGEMENT APPROACH

The Cherokee CQC System Manager will control the work in phases to ensure compliance with contract specifications and drawings. The work will be performed in accordance with the USACE three-phase quality control system as follows:

Preparatory Phase – Prior to initiating each definable feature of work, Cherokee will hold a Preparatory Phase meeting. Contractor and government personnel will be given a minimum of 24 hours advance notice of this meeting. The following items will be covered in this meeting:

1. Review of Contract Requirements – Contract requirements applicable to the definable feature of work will be reviewed. All contract documents will be reviewed, including the applicable drawings, specifications, and sections of the RAMP.

2. Material and Equipment Check – A check will be made to ensure that all material and equipment required for the work is on Site or has been arranged for.

3. Review Preparatory Work – A review will be made of any work that requires completion before additional tasks can be undertaken, to verify that the work has been completed satisfactorily.

4. Review Hazard Analysis – Before any work is initiated, a review of the Site Safety and Health Plan (SSHP) hazardous analysis will be performed.

Initial Phase – Prior to beginning any definable feature of work, Cherokee will hold an Initial Phase meeting. Contractor and government personnel will be given a minimum of 24 hours advance notice of this meeting. The following items will be covered in the meeting:

1. Preliminary Work Check – A check will be made of work required to be in place before proceeding with the next definable feature of the work.

2. Control Testing Review – A review will be made of the tests that will be performed to control the quality of the work.

3. Establish Level of Workmanship – The required degree of workmanship will be discussed and determined.

4. Materials Check – A review of materials will be made to examine for defects or damages.

5. Safety Check – A review of the SSHP plan requirements applicable to the work will be made to ensure compliance.

Follow-Up Phase – Daily checks will be made to ensure compliance with the contract documents and the RAMP. As part of this phase, any testing results will be accumulated and compared with contract requirements.

4.4 RESIDENT MANAGEMENT SYSTEM INTEGRATION

Cherokee will employ the Resident Management System (RMS) software to automate and simplify project administration. Cherokee has successfully employed this system on other projects and is experienced in its application.

Cherokee will use the RMS system to input daily QC and QA Reports, track submittals, perform the three-phase control process, track meetings and post minutes and agenda, track invoicing, and track closeout documents.

4.5 MATERIAL SAMPLING AND TESTING

Prior to beginning a work phase that involves sampling and testing, the CQC System Manager will confirm that the sampling team, laboratory, and Project Chemist have been notified; have reviewed the Sampling and Analysis Plan (SAP); and will implement the Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) requirements. The Project Chemist will review laboratory results in conformance with the data review requirements set forth in Section 1450A, Chemical Data Quality Control of the landfill removal technical specifications. The Project Chemist will provide the USACE results of the chemistry data review within 14 days of receiving the results from the laboratory. Copies of summary data will be kept on the project Site.

4.6 LANDFILL CONTENTS DISPOSAL

Copies of all waste profiles and manifests documenting disposal of landfill contents will be maintained on Site. Daily tallies of truckloads or bins of waste removed from the Site also will be maintained on Site. Copies of this documentation will be attached to the daily CQC report.

4.7 IN-HAUL CERTIFICATION

Copies of all laboratory analysis that certifies the quality of in-haul material and in-haul material bills-of-lading will be maintained on Site and included in the daily CQC report. Records of the number of in-haul material loads and the weight of each load will be maintained on Site and attached to the daily CQC report.

4.8 EQUIPMENT CALIBRATION

All instruments used in the conduct of the work, including the photoionization detector (PID), will be calibrated daily. Records of the calibration will be maintained on the Site and included in the daily CQC report.

4.9 FINAL INSPECTION

A final inspection will be held at the project Site. Contractor and government personnel will be given a minimum of one week advance notice of this meeting. The following items will be covered in the meeting:

1. **Data Review** – Project documentation of landfill material removal and disposal will be reviewed.

2. **Review of Disposal Documentation** – Documents confirming receipt of all waste removed from the site and received by the disposal facility will be reviewed.

3. **General Site Appearance** – The Site will be walked and reviewed for general appearance.

4. **Removal of Unused Material and Temporary Structures** – All unused materials and temporary structures that are not to be left for incorporation into future work will be confirmed to have been removed from the Site.

4.10 RECORDING FORMS

The following forms will be used to document contract quality control activities:

1. **Construction Quality Control Daily Report** – To be used by the CQC Systems Manager to record daily work and quality control activities.

2. **In-Haul Control Log** – To be used by the CQC Systems Manager to record all loads of fill material brought onto the Site.

3. **Waste Disposal Control Log** – To be used by the CQC Systems Manager to record all loads of material removed from the Site for disposal.

The CQC report and copies of the In-Haul and Waste Disposal Logs will be submitted to the government the day following the day covered by the report.

5.0 SCHEDULE

The project will be performed in accordance with the schedule presented in Attachment A.

6.0 INDEPENDENT TECHNICAL REVIEW GUIDELINES

An independent technical reviewer (ITR) who has expertise in the same technical disciplines required for the preparation of the products has been assigned. The Contract Manager will be the principal coordinator between the technical development team (TDT) and the independent reviewer. The technical reviewer will be responsible for checking submittals, including all planning documents and the Site Closure Report. As each product is completed, copies will be provided to the ITR, who will review the product and provide comments. The TDT members will respond to and revise the submittals from the ITR. Both the written comments and responses of the ITR and TDT will be maintained in a spreadsheet until the project is completed. The ITR for this project will be Mr. Jerry Portele. Mr. Portele has over 20 years of experience in environmental investigations, site cleanup work, and associated documentation. The ITR will provide Certification of Quality Control documentation of each independent technical review, accompanied by a certification indicating that the independent technical review process has been completed and that all technical issues have been resolved.

ATTACHMENT A
PROJECT SCHEDULE